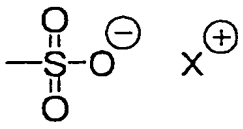
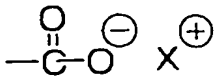
WHAT IS CLAIMED IS:

1. A lithographic printing plate precursor comprising a support having a hydrophilic surface having provided thereon an image-forming layer containing a hydrophobic high molecular compound having at least either a functional group represented by formula (1) or a functional group represented by formula (2):



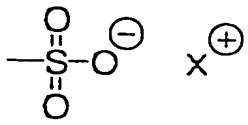
(1)



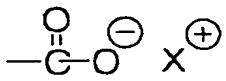
(2)

wherein X^+ represents an iodonium ion, a sulfonium ion or a diazonium ion.

2. A lithographic printing plate precursor comprising a support having a hydrophilic surface having provided thereon an image-forming layer containing a hydrophobic infrared ray absorber having at least either a functional group represented by formula (1) or a functional group represented by formula (2):



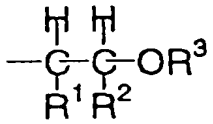
(1)



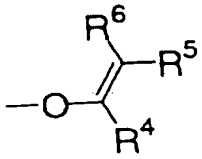
(2)

wherein X^+ represents an iodonium ion, a sulfonium ion or a diazonium ion.

3. The lithographic printing plate precursor as claimed in claim 1, wherein the image-forming layer contains a compound having at least either a functional group represented by formula (3) or a functional group represented by formula (4):



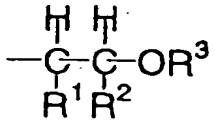
(3)



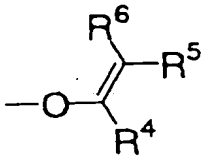
(4)

wherein R^1 and R^2 each represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R^3 represents an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R^4 represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; either R^5 or R^6 represents a hydrogen atom and the other represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; and arbitrary two of R^1, R^2 and R^3 may form a ring, and arbitrary two of R^4, R^5 and R^6 may form a ring.

4. The lithographic printing plate precursor as claimed in claim 2, wherein the image-forming layer contains a compound having at least either a functional group represented by formula (3) or a functional group represented by formula (4):



(3)



(4)

wherein R^1 and R^2 each represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R^3 represents an alkyl group, an aryl group, an alkynyl group or an alkenyl group; R^4 represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; either R^5 or R^6 represents a hydrogen atom and the other represents a hydrogen atom, an alkyl group, an aryl group, an alkynyl group or an alkenyl group; and arbitrary two of R^1, R^2 and R^3 may form a ring, and arbitrary two of R^4, R^5 and R^6 may form a ring.